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ORIGINAL DEPARTMENT.

LECTURE.

ON INFANTILE PARALYSIS.

Delivered at the Orthopædic Hospital and Infirmary for Nervous Diseases,

BY WHARTON SINKLER, M.D.

Reported by FAIRFAX IRWIN.

Gentlemen—The disease to which I shall call your attention to-day is one of considerable importance, because, although it is one of comparatively common occurrence, it is but little understood by the general practitioner, and the text-books, until recently, have either not mentioned it, or have given imperfect descriptions of it. I refer to infantile paralysis. The affection has been called by a great variety of names. Duchenne, who first described it, gave it the name of "fatty atrophic paralysis." Meigs and Pepper call it "atrophic infantile paralysis," and it has also been called "essential infantile paralysis." Hammond formerly used the name "organic infantile paralysis," but now, following Seguin, he calls it "infantile spinal paralysis." What all these authors have attempted to express, is that the disease is one peculiar to childhood, and that it is distinct from paralysis produced by brain lesion or by spinal meningitis or myelitis. None of these names express this, so I prefer to use the name "infantile paralysis," until a better one is proposed, and to term the other forms of paralysis in children according to the lesion producing them.

The disease, however, is not confined to children, for what seems to be an identical affection is met with in adults. Dr. Seguin has published a number of cases, of what he calls "spinal paralysis of the adult," and I did hope to have shown you to-day a case of that disease, but the patient, I am sorry to say, has failed to come.

We have had a large number of cases at this institution, of infantile paralysis, and some time ago I tabulated, in *The American Journal of the Medical Sciences*, eighty-six cases. Since then I have been able to add twenty-two more.

I will now call your attention to some of the distinctive characteristics of the disorder. It generally occurs in a child previously healthy, between the ages of eighteen months and three years.

The patient is attacked suddenly; or more commonly, after a feverish and restless night, it is found paralyzed. After the attack, certain parts recover much sooner than others. For example, in a case in which all the limbs are affected at first, the arms usually recover in a very short time, say in from ten days to two weeks. The more deeply palsied limbs remain so for months before signs of improvement are seen, and in the meantime they atrophy.

The attack comes on without convulsions. It is well to bear this in mind, for Hammond, who is good authority, says that convulsions do occur at the outset. In but one of one hundred and eight cases which have come under my observation were there convulsions.

There is usually fever for a day or two, pain when the child is handled, and it complains of pain in the back, if old enough to do so. There is never anæsthesia, hyperæsthesia, nor paralysis of the bladder or rectum. Some of the limbs, as I have said, recover very quickly,

others atrophy and become cold and shrunken. As the least paralyzed limbs get better, the contrast between them and the atrophied parts is greater. When atrophy of the muscles occurs the growth of the bones is also retarded, causing shortening of the limb.

I now show you a typical case of the disease under consideration. G. F., aged eight years, came to the clinic in 1874. When six years of age, having been previously healthy, she had a fall while walking. There was at the time no apparent injury; but next day the mother of the child noticed weakness in its legs; there were no convulsions, but the little patient was feverish, and by evening there was general loss of power. The fever lasted for two weeks, and she was "out of her head" most of the time. The arms recovered in about five weeks, at which time the only improvement observed in the lower limbs was slight power to move the toes. Since then she gradually improved. When first examined by me there was equino-varus of the right foot, but no deformity of the left foot. She could flex the toes of the right foot, but could only extend the foot, and could not stir the left foot or toes. She could flex the right leg, but not the left. There was recurvation of both knees. The surface was cold and mottled. There was failure to respond to the Faradic current, but a strong galvanic current moved all the paralyzed muscles.

As her parents lived at a distance, and could not then leave her at the hospital, I ordered an apparatus for the limbs and sent her home. A few weeks ago she returned to us, as she had not improved in walking. If you look at the legs you see clearly the characteristic appearances of the disease. The skin is mottled, like a piece of castile soap, and the day is not cold. You notice that the right foot, now I hold it up, has equino-varus, *i. e.*, the heel drawn up and the toes pointing down, and the inner side looking up. The deformity is caused by contraction of the tendo-Achillis. There is but little deformity of the left foot, only slight equinus. She cannot extend either leg; she can flex the right leg readily, but the flexors of the left leg are weak; there is no power to flex the right foot, but she can extend it; she flexes the toes, but cannot extend them; she can neither flex nor extend the left foot, but she flexes the toes. There is, I see, slight power to flex the foot. Her back is straight, and there is no trouble with the bladder or rectum.

Another thing I wish to call attention to is the shape of the legs: they are knock-kneed, and when I extend the leg I can extend it too far; it looks almost like flexing it backward; this is called recurvation of the knee, and is owing to relaxation of the ligaments of the knee-joint and flexor muscles of the leg, the biceps, semi-membranosus and semi-tendinosus. In the right leg you observe the same thing, but in a less degree. Look at the toes: they are purple, cold, and crowded together. There is no sign of slough, no cicatrix, nor any want of vitality in the skin, but, you see, if I pick up a fold of the skin it is adherent to the subcutaneous cellular tissue. I cannot separate it, as in a healthy limb. The limbs are cold below the knees, although the temperature is better than it was. Notice that when she stands she bears the most weight on the right leg. Both knees are bent far back, and the foot is thrown out and then flopped down when she walks. I want you to observe her general appearance. You see she is a strong and healthy-looking child, and she has always been so, both before and since the paralysis. I have not examined the temperature of the limbs, but have no doubt that the thermometer would show great difference between the least paralyzed limb and the one most affected. Here is another case of infantile paralysis in which there is paralysis of the left leg. The temperature of the left calf is 74°, while that of the right is 84°, a difference of ten degrees.

I now present to you again the first case, who has had her apparatus applied while you were examining the other patient. The object of the instrument is to prevent the recurvation of the knees and to support the limbs. You observe that it extends to the hip-joint; at the knee there is a joint with a spring, which locks when the patient stands and keeps the leg extended; when she sits down she can easily flex the leg by raising the catch. A strong elastic band supplies the place of the flexors of the foot, and I want you particularly to notice how it is arranged. Instrument-makers generally attach one end of the elastic band to the outer steel rod of the instrument, just below the knee, and the other to the outside of the sole of the shoe. The result of this is to draw up the outside of the shoe, and to cause the patient to walk on the inside of the foot. Mr. Kolbé, our machinist, at my suggestion, has applied in this case, and in several others lately, a bifurcated

strap, which is attached to each side of the shoe, and from this an elastic band runs up to join another strap, which is also bifurcated and attached to each side of the apparatus just below the knee. In this way the power to flex the foot is applied so as to lift it in the median line.

The patient will now show you what she can do in the way of walking, and you see that, with the aid of a cane, she gets about very well. Since she has been admitted the legs have been daily manipulated and galvanized, and her condition shows the satisfactory results of the treatment, for with the same apparatus she made no progress until the local treatment of the limbs was begun. In speaking of the peculiar features of the disease, I alluded to the different modes of onset.

Dr. Mary Putnam Jacobi, in a very able article on infantile paralysis, divides it into several varieties, depending on the onset. There is no practical necessity for this division, as the treatment is the same in all varieties, but it is interesting always to study all the peculiarities of a disease, and in this way we are often able to throw light on previously obscure ailments. I have been able to verify all the divisions which Dr. Jacobi has made, but one or two, and have added another mode of onset which she does not allude to.

The first variety is where the paralysis comes on suddenly, the patient being under observation when attacked. The child may be playing, and suddenly drops, palsied. The proportion of these cases is small.

Dr. Jacobi found but twelve out of one hundred and sixty-three cases which she had collected from various sources. I observed six out of one hundred and eight cases.

The second class is much like the first, the only difference being that the paralysis has come on during the night, when no one has observed the child.

The third variety is the most common, and is that which I described in speaking of the usual characteristics of the disease.

The fourth class is where paralysis is preceded by convulsions. In only one out of my one hundred and eight cases was this the case; but in two convulsions followed the paralysis.

Dr. Jacobi found four out of one hundred and thirty-seven cases.

The fifth class is where the disease follows one of the acute fevers, such as measles or scarlatina, and sometimes it occurs during whooping cough.

The sixth variety is where the disease comes on gradually. The child begins to limp; the legs get weak three or four days before the paralysis is complete, and there are no acute symptoms.

As to the cause of infantile paralysis, all writers agree that it is very obscure. Age exerts a very decided influence, it being essentially a disease of early childhood. Of the cases which I have tabulated, eighty-four of the one hundred and eight occurred between six months and three years.

Sex appears to exert no influence whatever. Vogel says more boys are affected than girls, but he gives no cases. Of my one hundred and eight cases, fifty four were males and fifty-four were females.

Adams, in his work on "Club Foot," remarks that the occurrence of palsy seems to be common with dentition, and the age at which it usually occurs seems to be confirmatory of that statement.

I have called attention to the fact that the disease is most likely to occur during the hot months. It seems as if hot weather and teething combined serve to produce it. Children are more liable in summer to all nervous diseases, and it does not seem to be necessary that the child should be under the influences of a city life, for several of the cases which I have seen were attacked while living in the country.

I have examined seventy-two cases, in reference to the season at which they were attacked, and find that in fifty-two of them the disease occurred in the months of June, July and August, and thirteen in May, September and October. These figures, I think, speak very strongly to show the influence of heat in the production of infantile paralysis.

It has been suggested that direct exposure to cold, such as, for instance, sitting on a stone step, may act as a predisposing cause, and Dr. West refers to two cases which he supposed originated in that way.

Now, as to the frequency with which different parts are affected. The tibialis anticus muscle is most commonly paralyzed, then the extensors of the hand and of the leg, next the flexors of the foot, and lastly the deltoid. The sterno-mastoid is mentioned by Adams as being sometimes paralyzed, but we have never had a case

here. When the paralysis has been general, it is most commonly found in both legs alone, or in one leg, or one arm. The deformities of the feet are of interest more to the surgeon than the physician. Equinus is the most common, varus and valgus being met with in about an equal number of cases.

Pes calcaneus is where the patient walks on the heel. It is produced by paralysis of the extensors of the foot, the flexors remaining intact, and is the rarest of all the forms of club foot. I have met with but two instances of it. There have been many suggestions as to the cause of these deformities. They are probably in part owing to the action of the healthy muscles when their antagonists are paralyzed, and in part to the position which the foot assumes when at rest. The foot naturally falls into the equinus position, and shortening takes place in the extensors. Equinus is the most common deformity.

There is often as much arrest of growth in the foot as in the leg. You will frequently see in limbs, one of which is palsied and the other not, a difference of half an inch in the length of the foot. In regard to the pathology of the disease, it was at first thought that there were no changes in the cord; some said there was congestion, others denied it. Drs. Lockhard Clark and Charcot have done more in clearing up the pathology of infantile paralysis than any other writers In a transverse section of the cord, of which I have attempted to draw for you a diagram on the blackboard, the posterior horns are found healthy, but it is in the anterior cornua that you find the nerve-cells have atrophied and disappeared, and that the connective tissue has increased and become denser, forming the so-called sclerosis of this part of the cord. These conditions have been found in post-mortem examinations of Infantile Paralysis by the above authors. The first lesion is a myelitis, confined to the anterior horns of gray matter, causing their degeneration and atrophy of the nerve cells. The prognosis depends on the length of time the disease has lasted before treatment has begun. Often, in cases of paralysis of the lower limbs, you can restore the power of walking, but if there has been much change in the muscles, if they have undergone fatty degeneration, you can hardly expect to restore complete muscular power to the limb. I think you will find the diagnosis simple enough, if you remember the points I gave you in speaking of the characters of the disease; you can exclude cerebral trouble, as you would in that case have convulsions or loss of consciousness. There is no paralysis of the bladder or rectum, no anæsthesia nor hyperæsthesia, which are symptoms of myelitis and meningitis. The most crucial test is the electrical condition of the muscles. Almost from the first they refuse to respond to the Faradic current; they will respond to the constant current, however. It is stated by some writers that for the first few days after the attack the muscles will respond to the Faradic current. As to the treatment, at first it is well to use counter-irritation over the spine, leeching, etc., as when we have inflammation to deal with; if the child is teething and the gums are swollen, lancing is of benefit.

When the patient is seen later, electricity is one of the most useful agents we can employ. In the selection of the kind of electricity, we must be guided by the condition of the muscles. If they respond to the Faradic current, we should use it, but if not, then the galvanic current will be best. In addition, we may use manipulation, friction and kneading of the parts, and the application of dry heat; the latter are very valuable adjuvants to treatment. Strychnia given internally is often of benefit. Barwell has used strychnia hypodermically, and claims to have had good results. I used it in two cases in this manner, but without any benefit to the paralysis. It is well to apply an apparatus early, in order to prevent deformity. Some form of go-cart, or the "wheel crutch" of Mr. Darrach, is of great value, as it enables the patient to walk about and exercise the body, when otherwise the paralysis would prevent locomotion. Tenotomy should be resorted to when the deformities cannot be overcome by an apparatus. Dr. Taylor, of New York, objects to cutting tendons, but I cannot see how he can stretch a contracted plantar fascia, or in some cases the tendo-Achillis.

In conclusion, let me advise you never to be deterred from efforts to relieve the most hopeless case, for some improvement can be made in almost every one, and in the majority the results are very satisfactory. But in this disease, above almost any other we are called upon to treat, patience by both physician and patient, is an essential element of success.

COMMUNICATIONS.

ON THE RADICAL TREATMENT OF UTERINE CANCERS.

BY WILLIAM GOODELL, M. D.,

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(Read before the Philadelphia County Medical Society, January 10th, 1877.)

A cancer of the womb usually begins on the vaginal portion of the cervix, and creeps upward. The part first attacked is that which bears the brunt of the "insults" of coition and of parturition. This course is not invariable, for I have seen a true cancer start in the body of the womb, and gnaw its way downward to the cervix. But the former course is fortunately the one so commonly taken, that in a large majority of cases the parts involved, being accessible, can be treated surgically, and, as I hope to show, beneficially.

The diagnosis of uterine cancer is usually not difficult. Other diseases may be mistaken for it, but very rarely is it mistaken for anything else. The speculum so often breaks off the friable vegetations, and starts up an obscuring, and sometimes a serious flow of blood, that it should not in the first instance be resorted to for the purpose of diagnosis. A digital examination is generally all that is needed, and I would suggest that, in order to avoid the chance of infecting his puerperal cases, the right-handed physician should train the fingers of his left hand to this work. Should a cancer in its early stage be undistinguishable, by the ordinary tests, from other cervical diseases, the diagnosis may be cleared up by the introduction of a sponge tent. Thus, if the cervix soften down, the os dilate, and the mucous membrane become movable under the expansion of the tent, the disease is probably a benign one. If, on the other hand, the cervix remain hard, its mucous covering immovable, and the os unyielding, the suspicion of malignancy will be confirmed.

How to distinguish the various kinds of uterine cancer is not only often impossible, but is clinically needless. The life-saving problem seeking solution is, not the character of the cancer—whether it be schirrus, or be encephaloid, or be epithelial—but the removal of the cancer. Yet it is well to bear in mind that of these three kinds, the epithelial, and especially its vegetating form, is the least malignant and the most localized. While unprepared to range myself under the banner of the "localists," I am yet sure that uterine cancer very commonly attacks women of fine physique and blooming health; and that, as pointed out by Cruveilhier, a cancer of this organ is, of all cancers, the least prone to infect the system. Its victims die, not so much from specific systemic poisoning, and from transference to distant organs, as from septicæmia, from embolism, and from the exhaustion induced by pain, by sleeplessness, and by the bloody or the serous fluxes. I am also further satisfied, that the patient of the "localist" will live longer, suffer less, and stand a better chance of a cure, than the woman who is treated by palliative measures only.

Whenever the cervix becomes the seat of a malignant growth, the common sense indications are, either to eradicate the disease, or to check excessive serous or bloody discharges, to correct the fetor, to allay pain, and to prolong life. Now, the crumbling vegetations and surface growths cause these serous, bloody and fetid discharges. The pain comes from progressive infiltration. It stands, then, to reason, that whatever restrains these must prolong life. And, of course, if the disease can be eradicated, life may be saved for good. Hence the plan which meets these indications is assuredly to take away the whole, or as much as possible, of the diseased structures. To achieve this, the whole cervix must be amputated, and that either by the cold wire of the écraseur, or by the hot wire of the battery. Should this operation wholly remove the cancerous mass, well and good. But if not, the remaining outgrowths, and the underlying infiltrated tissues must be dug out with the finger-nails, scraped off with Simons' spoons, and snipped off with scissors. The resulting deep and funnel-shaped cavity must next be either charred by fuming nitric acid, or seared over by the hot iron.

I shall not weary you with a recital of all the cases that have passed under my observation, but shall give simply such as illustrate the different operations needed for this mode of treatment.

CASE 1.—Early in November, 1873, I was summoned into the country by my friends, Drs. Joshua R. Evans, and R. N. Downs, to see Mrs. A. M., a woman of about forty, and the mother of several children. I found her bedridden and looking as if she had not long to live. She was, in fact, so low as to be dull of

hearing, stupid, and apathetic, like one in the last stages of typhoid fever. Her rest was broken by severe stabs of pelvic pain, and her strength exhausted by alarming intermenstrual hemorrhages. By the frequency of the latter her complexion had become waxy, and her flesh so translucent-looking as to give the impression that, by the aid of a strong light, one could map out every viscus of her body.

Some months before she had begun to feel unusual sacral pains; then to have watery and bloody discharges; and what with the loss of rest, and with the drain of vital fluids, she had become so weak as to take to her bed some three weeks before my visit. I found the upper portion of the vagina filled by a mushroom-like tumor, which sprang from the cervix of a movable womb. With some misgivings, on account of her weakness, we put her under ether, and noosed the mass in the loop of the écraseur. The whole cervix was cut off, but not without the snapping of a very strong wire. Some cancerous nodules beyond the reach of the wire were scraped away with Simons' spoons, but hastily, on account of an alarming hemorrhage which followed the removal of the mass. This was checked by an application of Monsel's solution, and by plugging up the vagina. The tumor was subsequently examined by Dr. J. G. Richardson, who pronounced it to be malignant.

A week later I charred the whole raw surface with fuming nitric acid. This visit is vividly impressed on my mind by the following circumstance, which I note down as a warning to others. At the suggestion of a chemist who should have known better, I had closed my bottle of nitric acid with a rubber stopper, instead of with the glass one, which was liable to get loose. During the jolting of the railroad cars, and of a ride of several miles in a carriage, the stopper was attacked by the acid, and a gas generated. While kneeling before my patient, and stooping over the bottle to open it, the stopper popped out, and a sudden explosion forced out a fine spray of the contents over the upper portion of my person. I quickly plunged my face and hands into a basin of water, and fortunately escaped with nothing more serious than a smart conjunctivitis and the ruin of a suit of clothes. Since this lesson I have used no other stopper than a glass one, and before taking it out I always cover the bottle with a wet wash-rag, and avert my face.

But to return to our patient. After another such application, and the use of arsenic, iron and ergot, she improved astonishingly. The grave seemed, indeed, literally to give back its dead. I never saw any one so low recover so promptly. The cervical stump skinned over, her hemorrhages stopped, her pains and aches left her like magic, and the color came back to her lips and cheeks. She very soon got out of bed, and for seventeen months performed all the duties of a brisk housewife. During this time I saw her perhaps half-a-dozen times. She came, not on account of any local trouble, but to be reassured that all was doing well. Each time I found the womb movable, and with no other reminder of a cancer than the absence of the cervix. To all intents and purposes she was perfectly well.

On May 29th, 1875, I was again asked by Dr. Evans to see her. I found her exhibiting marked cancerous cachexia and suffering from cruel sacral pains of recent origin. The still movable womb was absolutely without a vestige of disease. But through the posterior wall of the vagina I felt a hard, nodulous tumor firmly attached to the sacrum. Nothing more could be done for her than to allay her sufferings. A few weeks later she died.

Case 2.—J. R., a German woman, aged fifty-one, has had four children, the last one four and twenty years ago. Her menstrual flux ceased in 1870, but in November, 1874, a hemorrhage took place, which she mistook for rejuvenescence. Since then she has become much reduced by repeated floodings and by constant, rest-breaking pains. Early in November, 1875, I saw her for the first time. The so-called cancerous cachexia was then very marked. Her complexion was leaden and she was so weak as to need help in getting on the examining table. Most abominable was the stench arising from her person. I found the upper portion of the vagina blocked up by a large, nodulated mass, so friable that a very gentle digital examination brought on an alarming hemorrhage. I was glad enough to be able to check it with Monsel's solution and by a tampon.

On November 16th, 1875, she was ætherized, and brought before the medical class of the University of Pennsylvania. With the wire-écraseur, a cancerous excrescence as large as a goose's egg was removed. The womb was now found to be immovable, the cervix much enlarged, and occupied by an excavating ulcer.

Its sharp and rugged margin gave a crater like form to the part. There was no chance at getting the wire-loop above the site of the cancer. So, with the finger nails of my left hand, I dug out a handful of the more brittle growths, and scraped away the rest with sharp spoons of different sizes. Such portions as resisted these modes of attack were snipped off by the scissors. Free bleeding kept up until healthy structures were reached. By this operation the cervix was hollowed out into the shell of a funnel-shaped excavation, which reached from bladder to rectum, and up as far as the internal os. Into this a large sponge was packed, and the woman put to bed. On the next day this sponge was removed and the vagina washed out. For three or four days, in spite of repeated detergent injections, the stench of her discharges was overpowering. It poisoned the air of a large ward. It then passed away, and with it the slight febrile movement which always follows such operations. A week later I made a thorough application of nitric acid to every nook and cranny of the raw pit. Under arsenic, iron, the bichloride of mercury, and ergot, she rapidly improved. Her hemorrhages ceased, her appetite returned, her complexion cleared up, and she was soon able to resume her long-neglected housework. Her gratitude was great, and rather annoying.

In the following July, eight months after the operation, she had a hemorrhage. For this I made another thorough application of nitric acid, and it did not recur. I saw her last on December 29th, 1876. She was not losing blood, nor suffering pain; but she sent for me on account of growing weakness. I found her up, but too feeble to attend to all her housework. For the past week a kind neighbor has helped her along with it. The cancer has attacked the body of the womb, and she is evidently failing.

Case 3.—I. H., an English woman; was married nine years ago. She is twenty-nine years old, and has had two children. On account of several severe uterine hemorrhages, she was sent to me by a friend, early in March, 1875. Her youth, her blooming complexion and generally healthy appearance, pointed to a polypus or to a fibroid tumor, and I was somewhat surprised to find the cervix partly eaten away by a cancer. As the womb was movable, I urged an early operation. To this she did not at once assent, and it was not until April 22d that I brought her before the class. Seizing the cervix with a volsella forceps, I noosed it in the galvano-caustic loop, at a plane flush with the roof of the vagina. While burning it off, I made firm traction with the volsella, and counter-pressure with the shaft of the electrode, so as to remove as much as possible of the cervix. (*See this Journal* January 6th, 1877, p. 3.) Notwithstanding this was done very slowly, a small artery spouted from the cup-shaped stump. The bleeding was stopped by the porcelain cautery, with which the whole wound was again seared over. The hot wire also scorched the upper portion of the vagina, but she did not seem to mind this, and recovered without a bad symptom. Several weeks elapsed before I could get the sore to skin over, and I began to fear that it never would. But under repeated applications of the silver iodide, it finally healed up, and the woman became well. Two months ago, that is to say, nineteen months after the operation, she came to have me examine her. She was about to return to England, and wished, before going, to know the condition of her womb. She looked extremely well. Apart from the absence of the cervix, I could find no trace of a cancer.

Case 4.—Early in the spring of 1875 I was asked by a medical friend to aid him in the removal of a cancerous cervix. The lady was over forty-five years old, and the mother of several children. She had suffered from all the usual symptoms of such a cancer, and had finally taken to her bedroom, but not actually to her bed. I was struck with the typical leaden complexion of her face. The cervix was extensively invaded, both superficially and deeply, but the womb was movable. One of its lips had been eaten away up to and slightly beyond the vaginal insertion. By two installments of the hot wire the cervix and a portion of the vagina were removed, and the rest of the diseased structures burnt out with the porcelain domes. During the operation much traction on the cervix was needed, and a portion of the bladder was at first included in the wire-loop. It would certainly have been cut off, had not the discovery been made by passing in the little finger through the urethra.

After recovering from the shock of the operation, the lady's complexion began to clear, but her convalescence was not a rapid one. It was not until after she had been sent to the seashore that she slowly but steadily gained in health and strength. Nearly two years have now

elapsed since the operation, and, apart from cicatricial deformity, not a trace of the disease is discoverable. The lady is now able to attend to her household duties, and to be a useful member of society. The cancer may return; it probably will, as the vagina was implicated, but as things now look, she bids fair to live for years to come.

Case 5.—In February, 1875, the day I cannot now recall, my friend, Dr. W. R. Cruice, asked me to see Mrs. B., who lived in the outskirts of the city. I found a married woman, over fifty years old, bed-ridden for several weeks, and so worn out by constant suffering, and so drained by repeated floodings, that as Dr. Cruice expressed himself, and as I firmly believed, "she had not a month longer to live."

The womb was immovable; the cervix much enlarged and shockingly ravaged by a partly vegetating and partly excavating cancer. Being unadvised of the nature of the disease, I had not brought the needful instruments. She was, moreover, so low, that I dreaded even the loss of blood attending an operation. But, with Dr. Cruice's backing, I went to work, first with my finger-nails, and afterward with a small uterine curette that happened to be in my bag. At least two handfuls of cancerous flesh were thus removed. Not having any fuming nitric acid with me, and the nearest apothecary being far from the house, I swabbed out the excavation with a saturated tincture of iodine. Nearly two years have now elapsed, and I have not seen her since, but, as Dr. Cruice informs me, she soon got out of bed, and has all along been attending to her household affairs. She has had no return of hemorrhage, and last week was seen by him walking the streets. I am sure that she is not cured, but I am also sure that the operation has given her a lease of at least two years of life.

Now, in the foregoing cases, there can be no mistake between the relation of cause and of effect. Nor do they embody my whole experience, for I have thus treated thirteen cases of uterine cancer, and with very like results. In all, sexual abstinence was enforced, and the patient put on iron, the bichloride of mercury, arsenic, and ergot. The iron and mercury to redden the blood and to build up the system; the arsenic to repress the tendency to reproduction; the ergot to excite such tonic uterine contractions as tend to shorten the blood rations of these growths, and starve them out. The immediate effects of this treatment were invariably satisfactory. Life was lengthened out and made bearable; in one instance, as I believe, saved for good. The hemorrhages were stayed, the putrid discharges checked, and the cruel pains allayed. The appetite was restored, and bedridden patients were once more put on their feet. Even when the womb was firmly fixed, from extension of the disease to points beyond operative reach, much was gained by the removal of all the cancer possible, and in one case, by a second removal of fresh growths. Another point noticed was the invariable clearing up of the complexion after the operation. This fact leads me to think that the so-called cancerous cachexia is owing, not to a cancerous diathesis, but to absorption from a local cancerous lodgment. The cause is evidently topical, and not general.

In view of this favorable record, I cannot but think that absolute cures would result far more frequently were the cases brought to the notice of the physician at an earlier stage, when, for instance, the womb is still movable, and the cervix superficially attacked. The beginning of this cruel disease is not usually attended with any pelvic pains and aches greater than those belonging to ordinary uterine troubles, and they are, therefore, disregarded. Again, the woman is often fat and hearty, with perhaps a good color, and these tokens of health deceive her and her friends. When, finally, she seeks advice, it is for some exacting symptom of an advanced stage, such as a hemorrhage after coition, or putrid discharges. The womb will probably by this time be fixed immovably by cancerous infiltration in the connective tissue of the vaginal roof. Or the cancer may have eaten its way laterally to the peritoneum, or upward beyond the internal os uteri, and the parts are now too extensively diseased to be wholly removed. It must, however, be borne in mind that the immobility of the womb does not always imply an extension of the disease beyond its walls. The parts sometimes become matted together, from peri-uterine fibrinous exudation, an inflammation being set up by the irritation of the cancer.

The radical plan of treatment is not wholly devoid of danger, but less so than might at first blush be supposed. During the operation, if scraping be needful, the hemorrhage is free, usually quite so, until healthy structures are reached. But it has always yielded in my

hands to an injection of one part of Monsel's solution to three of water, followed by a sponge tampon, lightly packed into the funnel-shaped pit. The vascularity of the parts is such that, unless the cervix be amputated very slowly, a secondary hemorrhage may take place. This accident I have seen happen after the use of the hot wire, but not after that of the écraseur.

Injury to the peritoneum constitutes another hazard in the removal of the cervix. This accident cannot always be avoided, but the risk to life is greatly overrated. Thus, in order that the hot wire may pass through perfectly healthy tissue, Karl Braun does not hesitate to include a portion of the peritoneum (*Philadelphia Medical Times*, February 20th, 1875, p. 325). He declares that he has in this manner repeatedly made an opening into the peritoneal cavity, yet with apparently no increase of risk to the patient's life. I have never ventured wittingly to invade this cavity, nor have I yet met with the mishap of including the peritoneum in the wire-loop. But, on one occasion, while scraping away a cancer of the cervix with the nails of two fingers, I suddenly found them in Douglas' pouch. I took good care not to use any vaginal injections, and no untoward symptoms arose. The patient, indeed, kept her bed for only a few days, and then felt well enough to take a long journey home by rail. The bladder has been wounded, but it should never be. The introduction of the little finger through the urethra into this viscus ought always to guard against this danger, as it did in Case 4. While to ensure still further its safety, the cervix should, as a rule, but not as an inflexible one, be noosed while the womb is *in situ*, and not dragged upon. It is well also, when the écraseur is used, to pass up its shaft in front of the cervix, where the insertion of the vagina is lowest, and then by it to push up the womb before tightening the wire. This precaution is unnecessary when the hot wire is used. Soon after the operation the body-heat mounts to a sharp curve-peak, and the pulse sympathizes. This febrile movement lasts for four and twenty hours or more, and then the temperature tends to fall. On the third or the fourth day the discharges sometimes become offensive, and continue so for several days. After the scraping process, the stench is invariably overpowering. This must be met by vaginal injections of a claret-and-water colored solution of the potassium permanganate, while the danger of blood-poisoning should be lessened by the administration of large doses of quinia.

THE TREATMENT OF ENLARGEMENT OF THE SPLEEN, BY INTRAVENOUS INJECTION.

BY JOHN B. C. GAZZO, M. D.,
Of La Fourche Parish, Louisiana.

Many medicines when injected hypodermically act energetically on the economy, and may be detected in the secretions, thus showing that they have been absorbed. Sulphate of quinine, when given internally in one grain doses, may easily be detected in the urine by means of the ordinary tests.

I remember, however, having made many experiments on thirty-five individuals affected with various maladies, relative to this medicine being absorbed when applied through the skin, and in no case have I succeeded in detecting the slightest traces of the quinia in the urine, whether it was employed by hypodermic injection, through the subcutaneous tissue of the skin, or to the cuticle, denuded by means of blisters, etc. The effect was null in all. That the sulphate of quinine, hypodermically injected, exerts a marked effect, which causes at times severe pain, and that its use by this mode is liable to be followed by the formation of abscess, is undoubted.

The condition of the spleen can be ascertained by means of the plessimeter and percussion, before treatment, and the results are, therefore, in my estimation, of the utmost certainty.

From the analysis of five hundred cases, I consider it certain that splenic fever occurs independently of malarial causes, and in many instances arises from other noxious impressions upon the constitution. Inflammation and enlargement of this organ is frequently seen in various fevers. Sulphate of quinine quickly dissipates a large majority of the cases of enlargement, and even in its healthy state its volume may be reduced by the introduction of quinine through the stomach or bowels.

I think that in certain malarial fevers, associated with fatal hemorrhage, the latter might be attributed to a too rapid diminution of the spleen, under the influence of the sulphate of quinine; hence the dose of this valuable medicine should be proportioned to the enlargement.

The quinine, I believe, is absorbed by the

veins, and increases fever by its direct action on the spleen. I have noticed the following symptoms as indicative of the disease: more or less emaciated limbs; abdomen tumid; complexion leucophlegmatic, and finally, that of cachexia; congestive tumefaction, and transient pain in the left shoulder; and dragging of the splenic plexus.

The morbid differences in the size of the spleen suggest important consideration in patients suffering with intermittent fevers, when this organ is already enlarged from previous attacks. It is manifestly swollen during each access. The consistence of the spleen also varies much in different individuals, and in various diseases.

In softening, in its highest degree, it is converted into an inorganic pulp, exactly resembling a healthy spleen broken down by the fingers, and containing a greater quantity of fluid than natural. This state is often observed after malignant fevers, such as typhus and yellow fevers. When the membranes are torn, the substance of the spleen escapes spontaneously.

I was consulted by Mr. O. Babin, on the 24th of May, 1855, on account of palpitation and pain in the region of the heart, which had existed two years. It had been preceded by yellow fever some five or six months before. This affection was owing to a hypertrophy of the spleen, which had simulated a disease of the heart. (Communicated to the Boston *Medical Journal*, October 11th, 1855). Fever is always accompanied by derangement of the spleen, and repeated and protracted attacks produce enlargement of that organ; no preparation that does not comprehend the properties of a stimulant and depurant, acting chiefly on the muscular system of the spleen, can obliterate the malady.

After giving up all attempts at reducing the engorgement of the spleen by causing its obliteration with remedies by the mouth, I have adopted a mode to treat it by a simple procedure, to wit, subcutaneous injection. A solution of various substances, as ergot, oleum tiglii, crotonii, creasotum, glycerine, etc., may be used, as circumstances require. The spleen is punctured by means of a small exploring trocar, or the tube of a strong hypodermic syringe, and fifteen drops, or one drachm, of the solution is injected. The injection is at first repeated twice daily, and afterward at the intervals of one or two days. Although not essential, it is better for the patient to keep in bed. The advantages of the method are—the pain in the spleen almost immediately ceases, and the other inflammatory and congestive symptoms steadily diminish; the thickened fluid is gradually transformed into a thinner one, and by exudation gradually decreases in quantity, so that in three or four weeks it disappears entirely, and no tumefaction remains. The secretion is confined to the centre, and the surrounding induration gradually diminishes. Believing that in hypertrophy of the spleen the essential thing is to subdue its bulk, I have been long in the habit of employing ergot as well as croton oil and creasote, with great success. I either employ the fluidum extractum ergotæ, U. S. P., or Squibb's or Warner's fluid extract of ergot, from fifteen drops to one drachm. When I desire to produce more energetic subcutaneous action, I add one drop of croton oil, and, in very serious cases, one drop of creasote as well.

In July, of this year, 1876, I was requested to see Mr. O. Hebert, who, about three months previous to my visit, had been laboring under repeated attacks of intermittent fever; he had a peculiar sallow and unhealthy aspect, anæmic appearance of gums and buccal mucous membrane; tendency to hemorrhage, debility and loss of flesh. I found Mr. O. H. to be a gentleman aged about forty-five years, of a nervo-sanguineous temperament, with excessive irritation of the stomach, accompanied with the following symptoms: skin cool and clammy, pulse feeble and frequent, tongue saburral, features somewhat contracted, abdominal muscles contracted, severe acute pains in the left hypochondrium. These symptoms were soon relieved by proper treatment, and he was led to communicate the existence of a large spleen, "ague cake," as he termed it. I found it occupying the anterior region of the left hypochondrium, on a level with it, fixed in position, large as the head of an adult, at that time perfectly hard, and some days changeable in its position.

He, however, at the time, stated that when he was free from pain the tumor caused him no inconvenience; that the hypertrophy of the spleen would become soft at a certain period. This had continued fifteen years. The organ projected across the abdomen to the right iliac region. On percussion over the false ribs of the

left side, the respiratory murmur of that region proved to be altered. I found, from the ninth and eleventh ribs of this side, a manifest dullness over the left hypochondriac region, but the respiratory murmur was entirely normal. I commenced locally the employment of the subcutaneous injection into the integuments of the spleen; I used a solution of two parts of the fluid ergot, ethereal, and one part of glycerine. This solution was injected into the spleen, two syringefuls at once, and I repeated the operation after twenty-four hours. The more deeply the needle is driven, the less is the sensibility, and there was no essential impediment to the injection of the ethereal ergot into the parenchyma of the spleen; the result was the abatement of the oppression of breathing, while the spleen had become reduced in bulk. I was obliged to repeat the injection several weeks before a satisfactory change was made in some of the principal symptoms of the disease. A flannel roller was likewise applied to the abdomen, and he was recommended to use the following compound:—

℞. Quiniæ sulph., ʒiij
Fl. ext. cinchonæ, ʒvj
Fl. ext. rhei., ʒj
Hydrochloratis ammoniæ, ʒiij
Syrupi glycyrrhizæ, ʒxvj. M.
Sig.—Half a teaspoonful every three hours.

He was placed upon the use of a diet light and easy of digestion, but nourishing; exercise recommended, and as he was peculiarly melancholic, good company was advised. Three weeks after I changed the injections and adopted the following formula:—

℞. Fl. ext. ergotæ, ʒj
Olei crotoni. tiglii, gtt j.
Creasoti, ♏j. M.

Employed twice a day for two weeks, and ordered him to take one pill, every three hours during the day, of the following prescription:—

℞. Tannatis quiniæ, ʒij
Cinchonidiæ sulphatis, ʒiij
Ext jalapæ (Squibb's offic.), ʒij
Ext. dulcamaræ,
Extract. senegæ,
Olei piperi nigri, ää ♏x. M.
Ft. massa. div. in pil. cxx.

Under this treatment he entirely recovered in about six weeks.

—There were thirteen bodies of children in Tamaqua on the 17th, awaiting burial, death having occurred from whooping cough and scarlet fever.

Medical Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Reported for the Medical and Surgical Reporter.

Stated Meeting January 24th, 1877. Dr. E. G. Janeway, President, in the chair.

Fibroid Phthisis.

Dr. Finwell presented the right lung of a fireman, aged thirty-seven, who had died of pulmonary hemorrhage. The patient had been under Dr. P. Clark's treatment. Within a few years past he had suffered from slight pain in the chest, and occasional attacks of hæmoptysis. He was a robust man, and attended to his duties as fireman up to the 21st of this month, when he was seized in the morning with a violent attack of pulmonary hemorrhage, and died after spitting up one quart of blood.

At the autopsy the right lung was adherent everywhere. No tubercles were found. There was frothy mucus, but no blood in the bronchi. The other organs were normal. Dr. Briddon remarked that he had been called in to see the case in consultation. He had found moderate dullness on percussion, a superficial grating sound, and mucous rales, on auscultation over the right lung. The respiration was between 30 and 40, and the pulse 120. The patient had then stated that he had not been feeling well for two or three days previously.

Stricture of Rectum.

Dr. Bridge presented a specimen of chancroidal stricture of the rectum, taken from the body of a young woman who had died two weeks before, in Dr. Stephen Smith's ward, in Bellevue Hospital. The case was interesting, as it showed the advantageous results which accrue from the operation of lumbar colotomy, when performed for the relief of stricture of the rectum. The patient was thirty-eight years old. During 1874 she contracted venereal disease, and entered the House of Mercy. Two weeks later the vaginal sores had healed, and six weeks afterward she gave the usual symptoms of ulcers of the rectum; there were also fissures about the anus. The patient suffered from alternating attacks of constipation and diarrhœa. She gave no syphilitic history, though mercury and iodide of potassium had relieved an attack of iritis from which she was suffering. The employment of astringents in the treatment of the rectal ulcers gave no results, and the cautery was somewhat unsatisfactory. The operation of lumbar colotomy was performed in presence of Drs. Bumstead, Mason, and others. The bowel having been injected with air, the operation was proceeded with in the usual manner. The wound healed by first intention, and there were no signs of peritonitis present at any time after the operation. An abscess, however, formed near one of the

sutures, but soon subsided, and healed by second intention. The patient was entirely relieved, passing the fæces through the wound, her general health meanwhile improving. The fissures near the anus entirely healed. Rectal bougies were used twice a week after the operation. The specimen showed the calibre of the stricture to have very much increased, and some of the ulcerations had healed.

The President remarked that he had noticed, in several post-mortem examinations he had made, that the calibre of the stricture was greater than it had been during life. He was of the opinion that the rigidity and small calibre of the stricture was dependent upon contraction of the muscular fibres of the rectum.

Empyema.

The President presented a specimen, with a history as follows:—The patient had entered Bellevue Hospital on December 22d, 1876, suffering from a scalp-wound which he had sustained during an epileptic convulsion. The temperature rose, and during his illness it ranged between 100° and 104° Fahr. Later, fluid was aspirated from his chest. At the angle of the scapula, on the right side, there was redness of the surface of the skin, with crepitation and dullness. The percussion was vesiculo-tympanitic to the apex on the right side. On shaking the patient, succussion was detected, but there were no evidences of amphoric voice or respiration. The tongue was dry, and toward the last the patient sank into a typhoid condition and died from exhaustion.

Autopsy.—The upper lobe of the right lung was adherent to the chest wall. There was some gas in the pleura and fetid pus. The pleura was thickened, and numerous small points, which were the seat of sloughs, were seen in its substance. There was slight necrosis near the articulation of the eighth rib. Pus was also found beneath the latissimus dorsi. The cellulitis of the chest wall was of a low grade. The presence of gas in the cellular tissue was undoubtedly due to the decomposition of pus, as no perforation of lung tissue existed. The liver was granular and cirrhotic.

Editorial Department.

Periscope.

Poisoning from Green Paint.

Dr. J. Farrar gives the following instructive case in the *British Medical Journal*:—

A young man, aged 22, was taken very ill on the night of December 13th, 1876, with vomiting and purging, accompanied with pain in the abdomen of a colicky character, and so severe as to be best expressed by the word excruciating. Along with these conditions were great weakness and quickness of pulse (120), faintness, paleness of the face, pinched features, but with the eyelids somewhat red and puffy, and cold, clammy perspirations of an intermittent nature. The tongue was raw-looking, with portions of its upper surface denuded of epithelium, sore to the touch, and somewhat enlarged in size. There was no lead-line along the gums.

For a few weeks previously he had been ailing, from an attack of enteric fever, attended toward its termination with congestion of the lungs, and he was now, during convalescence, amusing himself by making large Christmas cards, etc., which he painted with colors, chiefly of a bright green; and not being aware of the subtle nature of the paints, and not being much accustomed to their use, he exercised none of the usual precautions adopted by the artisans of the trade to prevent the entrance of the materials into the system. On the contrary, his habits were such as to present the most favorable conditions for these poisonous substances to find their way into the economy; he neglected to wash his hands before meals. Beneath his finger-nails had accumulated large quantities of material, and he was in the habit of holding the brushes between his teeth; besides which, he worked long and energetically, without much intermission, in a room small and heated, which would be greatly improved if it could be ventilated. The green paint shown me was marked, "Poison, *Scheele's Green.*"

By way of treatment, the patient had a sinapism applied to the seat of pain, followed by linseed poultices as hot as could be borne. Internally, an astringent, containing tincture of opium, was given every hour so long as the diarrhœa and pain lasted, with half an ounce of brandy; the latter to be given more frequently if the faintness continued. His food was now to be chiefly milk, ground rice, beef tea, with bread crumbs, etc., administered in small quantities, frequently repeated.

The Treatment of Suppurative Affections of the Cornea.

The following principles are laid down by Mr. V. Solomon, in a recent volume of the London Ophthalmic Hospital Reports, and have received the endorsement of eminent surgeons:—

(*a*) That suppurative affections of the cornea and iris which do not rapidly yield to atropine and opiates ought to be dealt with by direct incision, through the median part of the cornea,

into the anterior chamber, just as much as a matter of course, as one would incise a whitlow or a thecal abscess.

(*b*) That such an incision may be made crucial or T-shaped, if it be thought desirable that the wound should not heal up rapidly.

(*c*) That an incision near the centre of the cornea, in length about one-third of its diameter, vertically through the lamellæ, into the anterior chamber, does not, as a rule, produce any serious damage to the cornea by way of opacity, nor to the iris by way of prolapse or synechia anterior.

(*d*) That in hypopyon a median incision of the cornea gives exit to pus and purulent lymph lodged in the anterior chambers more readily, certainly and completely, than a marginal incision.

(*e*) That an incision into the anterior chamber, through suppurating cornea, can arrest destructive suppuration and sloughing where iridectomy has been already employed unsuccessfully.

(*f*) That on incising, in its early stage, a circumscribed abscess in the layers of the cornea, a small white body sometimes escapes from the opaque spot, which, when placed under the microscope, proves to be broken-down corneal fibre, infiltrated with pus-corpuscles. Bader (p. 169) has observed that the opaque material forming hypopyon often contains débris of corneal tissue, but I am not aware that the corneal slough escaping from the incised spot, like the core out of a boil, has been identified.

Antiperiodics in Neuralgia.

In the London *Medical Times and Gazette*, February 3, 1877, Dr. C. R. Francis, Surgeon General H. M. I. A., commends large doses of quinine and arsenic in neuralgia. He goes on to say:—Quinine and arsenic are, of course, remedies to be used with caution; and the physician, before prescribing either in the full doses here advocated, will satisfy himself that his patient can tolerate them. The physiological action of arsenic is well known; and when the symptoms caused by it become distressing (although they may be controlled by a few drops of laudanum), the remedy should either be suspended or altogether left off. The effects of quinine are not uniform. Singing in the ears, with deafness and headache, are the most common, even after moderate doses, attended with, occasionally (after those that are larger), confusion of intellect, dimness and obliquity of vision, and sometimes a tendency to a (temporary) want of co-ordinating power in the extremities. Vomiting is now and then a distressing symptom. In large doses, quinine in some persons causes great and even dangerous prostration. As a rule, these effects, all of which I have seen, pass off after a time. A certain amount of tinnitus, with deafness (and even slight headache), need cause no apprehension. Where quinine agrees with a patient, very large doses may be tolerated. I have given eighty grains in the course of twelve hours with the happiest result.

With regard to the mode of exhibiting antiperiodics, I would observe that a preliminary evacuation of the bowels is essential, especially where quinine is used. Constipation will, in all probability, prevent success; and the disappointed practitioner may be disposed to condemn the remedy, whereas, in truth, he has not used it *secundum artem*. I have always given the antiperiodic from half an hour to an hour (so as to secure its full operation in the system) before the expected attack; and in very obstinate cases a smaller dose after it, followed by still smaller doses during the interval between the paroxysms. Generally, however, the one prior dose has been sufficient, supplemented by subsequent small doses extending over a few days, to fortify the constitution. Arsenic should not be taken on an empty stomach. Where this organ is irritable, the antiperiodic, in similar doses, may be introduced with equal benefit by the rectum; but a more elegant mode is by hypodermic injection. This plan is more economical, too; five grains of quinine thus introduced corresponds to twenty grains by the mouth. For hypodermic injections the neutral sulphate, which dissolves readily in water (one grain to twelve minims), without the addition of any acid, should be employed; otherwise, if acid be present, troublesome boils may follow the puncture. Where large doses of quinine are swallowed, pills or confection are the best form; but if this be objected to, suspending the dose in water, or mixing it with a glass of sherry, is a convenient and agreeable mode of administration. When dissolved in acid the natural bitterness of the drug becomes intensified.

Apex Murmurs in the Lungs.

At a branch meeting of the British Medical Association, lately, Dr. Frederick Taylor read a paper on the diagnostic value of apex murmurs. Dr. Taylor commenced his paper by referring to the great differences which existed, in cases of cardiac disease, between the murmurs, which varied in pitch, loudness, duration, rhythm, conductibility in different directions, and kind of combination. He then enumerated the various kinds of murmurs audible at the apex of the heart, specifying—1. The ordinary systolic blowing murmur, audible behind; 2. A short localized murmur, inaudible behind; 3. Presystolic; 4. Pure diastolic; 5. A combination of presystolic and systolic; 6. A combination of systolic and true diastolic; 7. A combination of systolic reduplicated second sound and diastolic murmur, following on the second element of the second sound. In thirty-five cases the first murmur was observed thirteen times; the second, seven; the third, four; and the other four much less frequently. The author then went on to treat of the significance of the localized systolic murmur in relation to mitral regurgitation. From a consideration of the

manner in which murmurs were generated, it was clear that other sources of sound than mitral regurgitation might cause the above murmur, and regurgitation could only be fairly inferred when the murmur was audible behind. Clinically, the murmur was associated with acute endocarditis, chorea, Bright's disease, and with ordinary cardiac disease in early or advanced stages. Of such cardiac cases, many presented a narrowed condition of the mitral orifice; and, while it was not proved that in such cases regurgitation did not take place, an examination of necropsies showed an important difference between results in different cases; while both kinds of murmur were observed in cases where the orifice was more or less narrowed, only one (the systolic audible behind) was present when the orifice was decidedly widened. Dr. Taylor next discussed the nature of the reduplicated second sound, which had been ascribed to want of synchronous action of the two sides of the heart, and also to intermittence of the auricular contraction. He attached considerable importance to it as a sign of mitral contraction. The occurrence of pure diastolic apex murmurs was then referred to; and finally attention was called to the last murmur (No. 7), which he had come to look upon as almost as certainly diagnostic of mitral constriction as the presystolic. In this, the first sound is covered or almost immediately followed by a short whiffing murmur; next to this is heard a distinct second sound; and, after a very short interval, there begins quite sharply and independently a b owing murmur of varying length, sometimes occupying the whole, sometimes only a portion of the remaining period of the heart's revolution; sometimes, therefore, terminating before, sometimes running up to, the first sound of the next beat. The murmur is distinctly localized, and mostly, in other parts of the præcordia, one can hear a reduplicated second sound. In at least three cases, he had known this combination alternate with a presystolic, the patients suffering the usual symptoms of mitral contraction. In conclusion, the following murmurs seemed to him suggestive of mitral narrowing, placed in order of trustworthiness; presyst olic, the compound murmur just mentioned, diastolic, simple systolic, and double second sound.

On Animal Vaccination.

The Doctor, in its issue of February 1st, speaks editorially as follows:—

Animal vaccination, as prescribed at Brussels, in the *Institut Vaccinal de l'E at*, gives excellent results, and is free from all objection. In a country where the law compels all parents who have assumed the great responsibility of rearing a child to have that child vaccinated, it is a duty to employ, if possible, a vaccine supply absolutely *sans peur et sans réproche*.

The practice of animal vaccination, as carried on at Brussels by inoculation of young calves, gives instantly a perfect guarantee to the public against the possible spread of such a terrible pest as syphilis by vaccination, and it moreover gives the power to the State to supply as much vaccine matter as it pleases without fearing lest the stock should run dry. In the epidemic of 1870-71 the vaccinal *Institut de l'Etat*, at Brussels, furnished about 500 vaccinations daily; and it could, of course, have furnished 10,000 had they been desired, since the number of points of vaccine obtainable is only limited by the number of calves inoculated daily.

The practice of human vaccination seems to be nearly falling into decay in Belgium, in favor of animal vaccination, for, even in 1873, of 1000 practitioners in that country practicing vaccination, nearly 800 sent for supplies of animal vaccine to the State department, and Dr. Warlomont reports that the *points* sent out by him in that year succeeded in 96 per cent. of vaccinations, and in upward of 60 per cent. of the revaccinations. He also tells us that of 10,000 children vaccinated by animal vaccine, and passing through the epidemic of 1870-71, not one was attacked by small-pox, which h lds also true, he adds, for the far greater number of patients revaccinated by its means. These facts have been fully set forth by competent observers.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——Dr. John V. Shoemaker sends us a copy of his appropriate Valedictory Address to the Class on Diseases of the Skin, at the Philadelphia School of Anatomy and Surgery, Jan. 12, 1877.

——In a neat pamphlet of twelve pages, Dr. LeRoy McLean, of West Troy, New York, reports two cases of œsophagotomy, and adds a table of twenty-three authentic instances of the operation; of these, four died, nineteen recovered.

——"The Index," is the name of a new monthly journal, published by William Erving, 37 Park Row, New York. It gives a classified list of the periodical literature of the United States and Great Britain, and contents of the transactions of learned societies. Medicine, surgery, and obstetrics are well represented. The idea is a good one, and should be supported.

——The admirable historical essay on "The Medical Men of the Revolution," by Dr. Toner, to which we referred some months since, has

been highly spoken of on all sides. It is one of the most valuable contributions to the historical literature of medicine in America which we could name. The Committee of Publication have left a few copies on sale at the office of this journal. Price, mailed, $1.

——A printed broadside, 36x26 inches, has been devised by Mr. L. A. Sayre, exhibiting "The Drugs of the United States Pharmacopœia Arranged According to Classes." It has three columns, each subdivided again into three. Of the latter, the first gives the natural order; the second, the officinal name, and the third, the part or form of the plant used in medicine. The display is very well chosen, and the scheme excellently adapted to the use of pharmaceutical and medical students. Price, per copy, 50 cents. It may be ordered through the office of this journal.

——A similar scheme is presented in a "Chart of Materia Medica," arranged by Dr. John V. Shoemaker. It presents the substance, reagent, and result, or color; the physiological test; and a list of preparations, with name and constituents.

——An able study of Poisonous Mushrooms, by Dr. Isaac Ott, has been sent us. His experiments confirm those of Schiff and others, that atropine is a complete antidote to muscarine.

——Dr. B. B. Browne, of Baltimore, in a reprint from the *American Journal of Obstetrics*, describes the relation of fibroid tumors of the uterus to eclampsia.

BOOK NOTICES.

The Medical Register and Directory of the United States, Systematically Arranged by States. By Samuel W. Butler, M. D. Second edition, revised and corrected. Published by D. G. Brinton, 115 South Seventh Street, Philadelphia. One volume, 8vo, 1877. Price, cloth, $5.50, leather, $6.50.

After several delays the second edition of this work is now laid before the profession. These delays arose from the continued reception of corrections and additions to the list, and the desire on the part of the editors to present it in as perfect a form as possible. Although, from the very nature of the undertaking, the presence of a certain number of errors is unavoidable, it is believed that the Directory is now as complete and as accurate as it is possible to make one in the present state of the profession in this country. Some of the States have been entirely re-written; in others, the plates have been corrected, and supplements added. Probably, in all, more than ten thousand alterations and additions have thus been made.

Many of these have been obtained through the efficient aid of prominent medical gentlemen in the several States, secretaries of medical societies, etc., and have, therefore, the best of authority for their accuracy.

The numerous local medical directories which have been published in this country, and the annual editions of a national medical directory in almost every civilized country in Europe, sufficiently prove the great value which such a compilation has for the public as well as the profession. Not only is it needed by all classes of business enterprises which are connected with medical, sanitary, and surgical supplies, but it is indispensable to unite the profession into a general organization. We should look, therefore, on a widespread interest in works of this kind as a very sure sign of an enlightened professional sentiment—as an opposition to the spirit of monopoly and secrecy which is so general and so discreditable in mere business competition.

In the manufacture of the work care has been exercised to present a clear white paper, well printed, and a binding of strong cloth or leather. The price at which the book is offered is certainly very low for a large octavo, of nearly nine hundred pages, double columned. Only a general patronage can justify such moderation, and as the book certainly merits it, we trust it will receive it.

Transactions of the Tenth Annual Session of the Medical Society of Virginia, October, 1876. Richmond, 1877.

The contents of this volume embrace an address by the President, Dr. F. D. Cunningham, chiefly upon the Organization of Professional Bodies; an annual address by Dr. G. McDonald, upon "The Doctor;" reports on the recent advances in the various sciences relating to medicine; Remarks on Aspiration, by Dr. W. D. Hooper; Biographical Sketches, and the Proceedings.

The Reports are characterized by marked thoroughness, extensive collation of authorities, and careful presentation.

THE

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A WEEKLY JOURNAL,

Issued every Saturday.

D. G. BRINTON, M.D., EDITOR.

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THE EPIDEMICS OF THE WINTER.

With the first of this year a weekly publication began in Berlin, under the supervision of the Imperial Health Office, with the aim of bringing to the knowledge of students of sanitary science all matters of general interest in that branch. It is entitled *Veröffentlichungen des Kaiserlich Deutschen Gesundheitsamtes.* Each number has a diagram representing the weather for the week in eight of the principal cities of Germany, and contains the weekly mortality rates of all German cities of 15,000 inhabitants and over, and also of a number of the leading cities of the world. Notes on epidemics and prevailing diseases are added.

From the first three or four numbers of this useful periodical, we find that at the close of 1876 the plague continued at that date to ravage some of the portions of Mesopotamia, especially near Hillah (the site of ancient Babylon), and along the Mohawil canal.

The cholera, which during last summer and fall had been steadily moving west from the Punjaub, through Afghanistan, had reached the Persian boundary, where, temporarily, it had halted. In December it was prevailing with severity in Eastern Khorassan, and in the vicinity of Duschack.

The epidemic of typhoid which for months had prevailed in Paris was rapidly declining. In the middle of November it reached its maximum, giving a weekly return of 150 deaths, to a population of 1,851,800 persons. The observations of the Parisian physicians have discovered some curious phases in this epidemic. Thus, not only were the cases of the disease unusually numerous, but the mortality was unusually large, the deaths being 35 per cent.—an enormous fatality.

Again, it was observed that the less the moisture of the atmosphere, the higher was the fatality—a testimony to Pettenkofer's favorite *Grundwasser* theory.

In October, which was a rainy month, the cases, though numerous, were not nearly so fatal. Hemorrhages were frequent, and the typhoid spots on the skin were prominent features, occasionally extending over much of the body, and simulating spotted typhus. As for treatment, in the face of the frightful mortality, not much need be said of it. At the Société Médicale des Hopitaux, the opinion seemed unanimous that the cold water method gave the best results. But when we learn that the average deaths in typhoid fever in the Paris hospitals is 25 per cent., we do not much care to imitate whatever treatment they commend.

Small-pox, in London and Liverpool, was quite rife in December; the cases in the London Hospital being in number, 586, 696, 737 and 823 for the four weeks of that month. During the year the deaths from that disease in London were in all 735, of whom 219 had been vaccinated, 325 not vaccinated, and the remainder unknown. This illustrates forcibly the necessity of revaccination and more efficient virus.

In Germany scarlet fever and diphtheria were the prevailing fatal diseases, and demanded the sacrifice of many lives, especially the latter. Relapsing fever and typhus were also common in some of the thickly populated manufacturing centres, where overcrowding, filth and insufficient food combined to depress vitality and encourage the disregard of the laws of health.

Notes and Comments.

Notes on the Chemistry of the Urine.

Reaction for Uric Acid:—Magnier de la Source substitutes bromine water for nitric acid in the known mur. ex. yd. reaction for uric acid. The sediment containing uric acid is treated with a single drop of bromine water (of such a strength that 100 cc. of water contains five to six drops of bromine). Upon evaporation on the water bath, a brick-red residue is left, which turns blue by the addition of a drop of potassium hydrate solution, or gives the well-known purple when ammonia is added. By this means the merest trace of uric acid can be discovered.

E. Fleischel modifies Brücke's modification of G. Melius' test for biliary coloring matter, by substituting a concentrated solution of sodium nitrate for the nitric acid, asserting that the color is retained a much longer time.

O. Rosenbach tests urine for biliary coloring matter, by first filtering the icteric urine through filter paper, which is thus colored from a yellow to brown color, and then obtaining the color reaction by touching the paper with a drop of nitric acid.

According to Von Mering, and Musculus, the greater part of chloral taken internally forms a product in the organism, and appears in the urine as urochloralic acid C_7, H_{12}, Cl_3, D_6. [O=16.]

E. Kütz has confirmed the statement of Strauss, that inosite may be found in the urine of healthy persons passing an extra amount of urine. It is not, however, constant in the urine of patients having diabetes insipidus.

Schmiedeberg and Meissner have shown that hyposulphurous acid is quite constantly present in the urine of cats, and frequently in that of dogs. And now A. Strümpel has found it in the urine of a typhus fever patient.

Von Mering examined the urine of a case of acute phosphorus poisoning; 1200 cc. of urine were collected in twenty-four hours of the third and fourth day after the administration of the poison, and contained 20.5 grammes of urea and 1.34 grammes of uric acid. It was free from sarko-lactic acid, peptones, leucin and tyrosin. During the whole examination—until the death of the patient—the urine was free from sugar, although the patient had taken two hundred grammes of cane sugar. The urine exhibited the bile pigment test in a very slight degree. An alcoholic extract of the liver yielded no sugar. In another case of phosphorus poisoning the urea contained sarko-lactic acid, but little urea.

Mimetic Nervous Disease.

A striking example of this class of maladies was reported to the Société de Biologie, at Paris, on November 22, 1876, by Dr. Magnan. At a girl's school near Paris, numbering one hundred and fifteen scholars, a girl, ten years old, was attacked with convulsions in one forearm on July 15, 1876. These convulsions gradually extended, in the next few months, to all the extremities, and were followed by strong tonic contractions of the muscles, but the child ultimately recovered. Up to November 19, *nineteen* other girls, of different ages, became subject to exactly similar attacks. They all finally recovered, and the average duration of the disease was shorter than in the original case.

The Dispersion of Ephelides.

These unsightly spots cause great annoyance, especially to the gentler sex. The well-known dermatologist of Paris, Professor Hardy, in a late issue of the *Progres Médical*, remarks that the pigment which constitutes these disappears under the influence of a slight inflammation of the skin, and in order to produce this, he recommends the following lotion: Corrosive sublimate half a part, alcohol sufficient to dissolve this, distilled water 125 parts, sulphate of zinc and acetate of lead, of each two parts. This lotion may be used of this strength, or diluted with water, according to the effect it produces. Generally after its employment a slight desquamation is observed, with a more or less complete disappearance of the ephelides. Prof. Hardy also treats them by local douches of sulphurous waters, such as those of Bareges

and Bagneres-de-Luchon. Alkaline lotions and douches of borate or subcarbonate of soda may also be employed. Frequently, however, the cure is but apparent, the spots reappearing with great tenacity when the local remedies are no longer applied.

The Anæsthetic Effects of Cold Water.

Several writers have claimed to have witnessed remarkable anæsthetic effects from hypodermic injections of pure cold water. Among these, the inventor of the aspirator, Dr. Dieulafoy, has, for several years past, been in the habit, in acute articular rheumatism, of injecting some ten drops of cold water around different parts of the affected joint, as a means of relieving the pain. The results are most remarkable. The pains abate, and the patient is enabled to move the joint; and in some cases the rheumatism is even cured by this simple means. The same means may be employed also in muscular rheumatism, ischias, etc. A repetition of these experiments does not always bring the same satisfactory results.

Syphilitic Enlargement of the Spleen.

Dr. Barlow, of London, England, at a recent session of the Pathological Society, brought forward a living specimen, illustrating enlargement of the spleen in congenital syphilis. A female infant of four months, with severe symptoms of congenital syphilis, presented considerable enlargement of the spleen. Dr. Gee had been the first to draw close attention to this condition; he had said that the spleen was enlarged in about half the cases of congenital syphilis, and much enlarged in about one-fourth; that the liver and lymphatics were sometimes also involved; that cases of great enlargement were generally fatal; and that splenic enlargement persisted in the survivors after the cachexia had disappeared, as a monument of its amount. In the present example the symptoms of syphilis were in abeyance while the spleen remained large. Dr. Barlow could not venture to say what the nature of the change was. In three cases examined there was firm enlargement and thickening of the capsule, without either amyloid disease or gummata. One might compare the condition with that of the spleen in typhoid fever; but in that disease the enlargement was soft and evanescent.

CORRESPONDENCE.

CLIMATE AND TRAVEL IN THE TREATMENT AND CURE OF CONSUMPTION.

By an Invalid Physician.

LETTER IX—TO CALIFORNIA, VIA THE ISTHMUS.

As the ocean route to California is one largely patronized by invalids, a description of its more salient features will not be amiss in this series of letters. I left New York, December 30th, in the "Acapulco," one of the steamers of the Pacific Mail S. S. Co. The fare to San Francisco was $130 currency. The invalid should, by all means, have a stateroom on the upper deck, and be careful to see that his ticket calls for corresponding accommodation on the steamer he takes the other side of the isthmus. After the latitude of upper Florida is reached, lower staterooms become uncomfortably, and even unbearably, hot. The steamers of this company carry competent medical officers, and a full supply of drugs. The stateroom accommodations are good, the food is fair, but the main saloon is nothing but a passage way between the staterooms, making, therefore, but poor provision for bad weather. A few delicacies carried along, in the shape of champagne (that on board is bad), Albert biscuit, and grapes, will not come amiss. The boats on the other side the isthmus are poorly provided with ice. For that which you use, you pay ten cents per pound. The supply generally fails before San Francisco is reached. One can telegraph, on arrival at Aspinwall, across the isthmus to Panama, to have a supply sent for personal use aboard the steamer. The chief steward, for a consideration, will take care of it. The advantage of the Panama route is, that New York can be left at any time in the winter without the fear of a snow blockade, which so often impedes overland travel.

When the "Acapulco" left New York a cold wave was advancing from the West. The thermometer was below the freezing point, and the streets were ice-clad and snow-bound. Within two days, after passing through a violent gale, our thermometer was within the sixties. The fourth day out everybody was on deck, and the sixth day we were all suffering from the *languor tropicus*, *i. e.*, too much roast beef and hot sun, and too little exercise. A vegetable diet, lime juice, claret and ice, or brandy and iced water, with a light cathartic, soon does away with this malady.

The steamers of this line used to call at St. Thomas; this has now been abandoned, and the route is by Watling's Island (land first seen by Columbus), Bird's Rock Island and Light, Crooked Island, and through Crooked Passage, Castle and Fortune Islands, Eastern end of Cuba, Island of Navassa, and then straight for Aspinwall (Cöla). The run is made on time, saving of fuel aimed at, and takes eight days.

It could easily be made in six. We reached Aspinwall about midnight, Sunday, January 7th, although at noon we were only one hundred miles from it. Appended is a meteorological table of the trip. Although the temperatures marked do not seem high, the heat the last three days was very oppressive, on account of the great moisture. It seemed at times like breathing steam, particularly after the cold, crisp air we had so lately inhaled. Some invalids on board became very weak. On account of the general relaxation of the pulmonary mucous membrane, generated by such an atmosphere, hemorrhages, sometimes fatal, occur. Excessive exercise, such as lifting, packing trunks, etc., should then be particularly avoided by the invalid.

NEW YORK TO ASPINWALL.

1876	Lat.	Long.	Ther. Air.	Ther. Water.	Bar	Weather.	Dis mls
Dec 31	38° 48′	73° 22′	34°	40°	30.20	N.W. wind clear	243
1877 Jan 1	32° 52′	73° 25′	58°	68°	30.00	Variable, wind & r'n	232
2	30° 28′	73° 15′	60°	68°	29.55	V'l'nt gale S E to N W	150
3	26° 25′	73° 37′	68°	70°	30.30	lt., f'r w'd clear	245
4	22° 25′	74° 23′	73°	77°	30.27	N. E. trade clear	245
5	18° 23′	75° 01′	80°	80°	30.15	" "	258
6	14° 38′	77° 02′	82°	81°	29.98	" "	256
7	10° 49′	79° 10′	82°	82°	30.00	Calm and cloudy	262

The temperatures of air and water here given are the averages of three daily observations. When the temperature of surface water approaches that of the surrounding air, the difference of temperature between day and night is materially lessened.

Aspinwall is a dirty, uninteresting, pestilential town. Here the cars are taken for Panama, forty-seven miles distant. The railway is in bad condition, and four hours are consumed in making the trip. One does not wonder at the fearful mortality attendant upon building this short line of rail, when he looks at the stagnant pools on either side of it, and feels beating upon his head the fierce rays of a tropical sun.

The vegetation is luxuriously rank, and at places beautiful. Interior Brazil would hardly show more profuse and varied growth than is witnessed here and there along this road. The inhabitants wear scarcely any clothing, little children running naked, and live in open huts with thatched roofs. At one station along the road, called Matachin, the traveler makes acquaintance with a banana that for flavor excels any variety of that fruit. It is thin-skinned and small, and will not bear transportation. A bunch of these hung in the stateroom prove agreeable companions after the steamer leaves Panama.

At the latter city, one finds the large, white pine-apple from Guayaquil, so mellow and luscious that it almost melts in the mouth. This fruit is not sliced, but after the rind is pared off, is punched from around the central stem with a fork. Eaten early in the morning, in a hot climate, they are the most cooling and appetizing fruit of which I have knowledge.

As our steamer did not finish taking on freight until next day, we remained in Panama all night. The hotel accommodations were good, appetites were sharpened for the fresh eggs and milk, by the sea-trip, and the city offers novelty to those who gaze on a Spanish American town for the first time. Tuesday, January 9th, we left the wharf on a tender for the steamer. At half-past two we were under way, and during the entire run to San Francisco, which we reached by noon, January 25th, we had very pleasant weather. The steamers that leave New York the last of the month make connection on the Pacific side with those which make the fewest stoppages. Steamers leaving New York the middle of the month connect with those stopping at all Central American and Mexican ports. This makes the voyage tedious, and as many of the ports are not healthy, adds to the risk of the invalid. Both the east and west coasts of Mexico and Central America belong to the *tierras calientes*, or hot regions. Further inland we come to the *tierras templadas*, which occupy the slope of the mountain chains, and have an elevation of from 2500 to 5000 feet. Here the mean temperature is from 68° to 70°F., and extremes of heat and cold are equally unknown. In Mexico the *tierras frias*, or cold regions, include the vast plateau, which is from 5000 feet upward above the sea The city of Mexico has an elevation of 7400 feet, but the thermometer there seldom falls below the freezing point. In the coldest season the temperature of the day varies from 55° to 70°, while in summer the thermometer seldom rises in the shade above 75°. The annual mean is 72°, about that of Rome. Prescott, in his "Conquest of Mexico," speaks glowingly of the climate in certain places, and I doubt not, if the country were ever tranquillized, and inter-communication and accommodation for travelers established, that many a consumptive would there be restored to health. But judging from a flying Mexican president, Yglesias, his cabinet, and horde of hangers-on, that we took on our steamer at Manzanilla, and brought to San Francisco, and from what I have seen of Mexico generally, that happy day is far distant. For Central America I have always had a melancholy interest, as on the soil of Nicaragua perished my elder brother. He was surgeon to General Walker's fillibuster expedition. Stephens in his glowing "Travels in Central America, Chiapas, and Yucatan," says, "The luxury of my rest in Guatemala still lingers in my recollections, and the morning air was the most pure and invigorating I ever breathed. Situated in the *tierras templadas*, or temperate regions, on a table land five thousand feet above the sea, the climate of Guatemala is that of perpetual spring, and the general aspect reminded me of the best Italian cities. The mere breath-

ing of the air is a luxury, and the evening is worthy of the day."

Imray, in his "West Coast of North America," says the plain on which Guatemala la Nueva stands is fifteen miles wide and eighteen miles long. The climate is mild and salubrious, the thermometer rarely rises above 70° and still more rarely descends below 64°." Speaking of the numerous table lands in Central America, the same author says, "they are all delightfully temperate and luxuriantly fertile. These regions especially seem to invite the residence of man and the culture of his hand. Probably no part of the earth presents a greater diversity of level on a surface of equal extent, and consequently no country possesses such a variety of climate, or offers such facility of adaptation to all kinds of productions and to all constitutions of men, from the sunburnt inhabitants of a tropical plain, to the hardy mountaineer inured to perpetual snows. Besides its staple productions of cotton, coffee, sugar, indigo, cochineal, and its various metals and minerals, the markets of the larger towns are supplied at once with the productions of torrid and temperate climes. At all seasons the green pea, the cauliflower and lettuce are sold along with the avocato—pear, sweet potato, olive, capsicum, banana, pine-apple, orange, sweet lemon, lime, shaddock, watermelon, muskmelon, sapote, mango, guava, fig, tamarind, pomegranate, and cocoa, cashew and groundnuts. The apple, pear, quince, cherry, etc., thrive, even without cultivation. So do garden flowers, which are still more varied. There is no lack of anything that nature can bestow to sustain, satisfy and delight. The peach tree and the rose run wild on the borders of the orange-grove, whose fruits and flowers are alike simultaneous and perennial.

"In the highlands of the interior the seasons are singularly regular; the dry weather commences about the close of October, and terminates on the twelfth or thirteenth of May, rarely varying a few hours. It is most frequently on the twelfth that the windows of heaven are opened. The sky is then suddenly obscured with thick clouds, which burst simultaneously, often accompanied with thunder, and sometimes with hail. This is confined to the afternoon, and returns on the following days, or, perhaps, for successive weeks at the same hour, or a little later.

"During the whole of the wet season, which is by far the most agreeable, the forenoon is almost invariably cloudless, and the atmosphere clear, elastic and balmy. The rains are often confined to the evening and night, or to the night hours only.

"During the dry season the mornings are often so cool and bracing as to predispose to active exercise, though fires are never resorted to. Through the day the sky is seldom obscured, and light clouds only are to be seen sweeping rapidly across the plains during the short twilight that ushers in the equinoctial day, thence they arise and hang in clusters around the mountain-tops, until the sun has gathered strength to dispel them; in the evening they return to attend to its setting, and add inimitable beauty to the gorgeous scene.

"At all seasons the entire disc of the moon is distinctly visible through all its phases, but now it shines with such uninterrupted clearness as entirely to supersede, when above the horizon, the necessity of artificially lighting the streets, and even in the absence of the Ruler of the Night the brilliancy of the stars dispels all gloom. On the more elevated plains, such as those of Quesaltenango, in the department of Los Altos, the heat is never so great as in England in summer, and the thermometer never descends to freezing."

I have quoted Imray at length, not only because his remarks are so pertinent to my letter, but because the book is strictly a nautical one, and rarely found outside a shipmaster's library.

A bright medical student from the Jefferson college, returning home to recuperate his health after a severe attack of pneumonia, Mr. Maximiliano Fernandez, of San José, Costa Rica, gave me an interesting climatic account of Central America. He stated that consumption was rarely seen in the uplands, and that they were a favorite resort of Cubans with lung troubles.

In concluding this brief glance at Central America, nervous people must remember that earthquakes occur here, as I forgot to state they also do in Algeria; but if it takes consumption and an earthquake added to kill a man, there is something distingué about his taking off that offers consolation to the survivors.

January 13th, we saw at sunrise, towering above the clouds, with no other land above the horizon, the volcanoes Agua (fire) and Fuégo (water). They stand 15,000 feet high, are visible forty miles at sea, and are marks to the mariner by day, as are the stars by night. Arrived at Acapulco January 15th, and had time to dine ashore. Arrived at Manzanilla the 17th, anchored off San Blas the 18th, and halted for twelve hours at Mazatlan on the 19th. This is a fair sample of a Mexican city, and the hotel Iturbide furnished us with most palatable repasts.

Saturday, the 20th, we were off Cape St. Lucas, lower California. Here we noticed a marked change in temperature; straw hats disappeared and warm clothing generally was produced. We passed through the Golden Gate on a beautiful sunny day (25th), found the thermometer in San Francisco 65°, the grass green and flowers growing. Appended is a table of temperatures from Panama to San Francisco. As with the markings on the Atlantic side, the temperatures recorded do not give an idea of the oppressiveness of the heat, so great is the moisture in the air. I would not advise invalids to make this trip earlier than October or later than May, as in the summer the heat is so oppressive as entirely to take away appetite even from the well. More-

over, malaria, during such time, abounds upon the coast, and a vessel stopping at the many ports to take in freight renders its passengers liable to contract the disease.

PANAMA TO SAN FRANCISCO, VIA ACAPULO, MANZANILLA, AND MAZATLAN. DISTANCE 3254 MILES.

1877 Jan.	8 A. M. Air.	8 A. M. Water.	M. Air.	M. Water.	4 P. M. Air.	4 P. M. Water.	8 P. M. Air.	8 P. M. Water.	MIDNIGHT. Air.	MIDNIGHT. Water.
9....	..	..	..	..	82°	82°	82°	81°	79°	82°
10....	83°	..	86°	..	88	85	84	83	78	80
11....	80	..	87	..	88	85	81	83	82	83
12....	82	..	82	..	83	81	80	80	82	82
13....	8·	..	83	..	80	82	80	84	82	84
14....	79	..	82	..	84	82	80	84	82	84
15....	76	..	84	..	85	84	82	83	82	83
16....	78	..	82	..	85	83	79	81	76	78.
17....	76	..	81	..	82	78	78	78	78	78
18....	76	..	76	..	80	78	74	78	72	74
19....	76	..	76	..	76	78	74	76	73	76
20....	71	..	72	..	74	72	68	72	66	70
21....	62	..	68	..	63	66	64	68	65	67
22....	62	66	64	64	66	64	62	64	60	64
23....	62	62	66	64	62	64	60	62	62	62
24....	59	59	62	60	64	62	..	..	..	..
25....	56	..	66	..	..	..	..	..	..	..

Los Angeles Cal., Feb. 12th, 1877.

"The Electric Bath."

ED. MED. AND SURG. REPORTER :—

In No. 240 of the Philadelphia *Medical Times*, I find a notice of my book, "The Electric Bath." This notice touches on only two points, viz. :— 1. The position of the patient in the tub, culminating in a question that displays the child-like innocence of the writer with respect to applied electro-physics ; 2. An allusion that I have made in my book to the employment of extract of malt. The discussion of the first point, being based on what I really have written, required no general reply. The second point, however, embodies so decided a deviation from truth, that I could not let it pass unnoticed. As soon, therefore, as my attention was directed to the notice, I sent the editor of the *Times* a letter, asking him either to set the matter right in his next issue, or else open his columns to me for a reply. My letter met with no response, nor has anything appeared on the subject in the last number of that journal. I therefore appeal to you to accord me space to lay the matter before the profession, asking as a favor from you what from the *Times* I claimed as a right, but which was denied me. The facts can be best brought to light by comparing my own language with that attributed to me by the reviewer.

From "The Electric Bath," p. 26, bottom line, et seq :—

"Extract of Malt I have employed as a roborant, either alone or in conjunction with iron, in cases of debility and malnutrition, and found it of service."

From "The Philadelphia Medical Times," No. 240, p. 213 :—

* * * "But we are also told that the author has seen the electric current cause the absorption of extract of malt diffused through the water of the bath, with excellent results, in anæmia. Extract of malt is chiefly glucose and nitrogenous compounds. Here another conundrum suggests itself. What can't a man see, who has beheld the human skin turned, for half an hour every day, into a gastric mucous membrane, by an electric current? etc."

Without wasting words in adducing evidence that modern physiologists admit unqualifiedly the fact that the skin absorbs substances in solution ; without dwelling on the circumstance that under the influence of the galvanic current this absorption is greatly enhanced (see foot note, p. 25 of my book), I claim that I have nowhere stated anything that would justify the inference that I look upon the skin as a gastric mucous membrane. So far as I know, stomach digestion consists of something more than mere absorption. According to the reviewer's logic, the circumstance—which I scarcely think he will dispute—that patients have been nourished by rectal injections would make the rectum also a gastric mucous membrane.

When (in No. 1040, February 3d, 1877 of your journal) I read your recent editorial on the "Times" reviews, I little thought that its truth would be so soon brought home to me personally.

In conclusion, Mr. Editor, permit me the pardonable satisfaction of congratulating myself, that a person who was evidently bent on subduing a well-meant effort to bring to the notice of the profession a very useful and beneficent remedy, could find nothing to launch forth but frivolous and undignified sarcasms.

GEORGE M. SCHWEIG, M. D.

New York City.

NEWS AND MISCELLANY.

Gathering Florida Arrowroot.

A correspondent, writing from Biscayne Bay, Dade county, Florida, gives some items of interest, among them the gathering of the roots from which arrowroot is made. The correspondent says :—

"Two men, with mule and cart, usually make $100 per month gathering and preparing the coontie for market. One hand gathers twelve barrels of the root, which makes about one and a third barrels of marketable coontie, or what is known as Florida arrowroot. The roots much resemble the rutabaga turnip. It is washed and ground, then put in a tub and water applied, stirred thoroughly, and left to settle about two hours, or until the starch, "thick as soft cheese," settles to the bottom. Then draw off the water, and change to another tub, separating the light coontie which collects on the top, leaving the pure article in the first tub, to which sufficient water should be added to give a consistency thin enough to facilitate its passage through the finest sieve or strainer. Place it in dryers containing twenty-five pounds each. In two days of good weather it is ready for market. The refuse, or "mash," is fed to stock ; horses, hogs, poultry, all thrive well upon it. By boiling the skimmings, a substance as

hard as bread is produced, which keeps well, and fattens hogs for market as readily and as well as corn."

Personal.

—Miss Marianna Gibbons, daughter of Dr. Joseph Gibbons, of Lancaster county, Pa., and a talented journalist, lectured in Lancaster city, on March 1st, on "The Life and Character of William Penn."

—Dr. Schweinfurth, the African traveller, is engaged at Cairo, elaborating his enormous botanical collections.

Items.

—An eminent physician of London is ready to give £100 toward a fund to cover the naked walls of the London hospitals, as he is confident that the contemplation of works of art is beneficial to the recovery of all classes of patients.

—The ladies of Chicago, writes a correspondent, deserve credit for the indifferent use of cosmetics; as a rule they are very natural in their complexions and stylish in their dress, but not remarkable for their beauty; they are too much inclined to *embonpoint*.

—The cattle plague is making fearful ravages in the Mongolian steppes. The Mongols make no effort to prevent the spread of the disease, and they even eat the sheep that have died of it. This state of things has arrested the overland tea trade, which was carried on by horses, camels, etc.

—The *Sanitary Record* states that in the village of Harbottle, Northumberland, no child has died during the last twenty years; a farmer and his three shepherds have between them forty-seven children, and during the past thirty years not a death has occurred in their families.

—A German medicine for sale in this city carries the following warning on the bottle: "Warning. Only that above mentioned packet up is the very pure salt of Sprudel, because it is produced by the inspection of the town officers, but that salt packed up in wooden boxes and also trading with that is false and counterfeit, and is our duty to let this be a warning to the gentlemen and ladies to buy it."

QUERIES AND REPLIES.

Dr. J. J. J., of Ark., desires a remedy for stomatitis materna, obstinate in character, which has resisted astringents, carbolic acid, chlorate of potash and other ordinary remedies.

Dr. J. S. W., of Pa., inquires:—Are astringent injections beneficial in anteversion, retroversion and prolapsus uteri? If so, what are the best remedies?

Dr. W. N. B., of Pa., writes:—Will some reader of the REPORTER please inform me where I can find some account of the "Study of Disease by Synthesis?" as proposed by Dr. Harvey Day, of England? Gentlemen knowing of any work, brochure or fugitive articles on this subject, will confer a favor by replying through the REPORTER.

OBITUARY.

DR. THOMAS HOLYOKE

Died recently in Grinnell, Iowa. He was a native of Brewster, Me., born in 1818. He received his early education at Bangor Seminary, and graduated in medicine at Harvard University. He practiced medicine in Maine six or seven years, when he removed to the central part of Iowa, and was one of a small number of Eastern men who, about twenty years ago, founded the town of Grinnell.

Dr. Holyoke was held in high esteem in a wide circle in his State, and was intrusted with many important administrative positions, including President of the Board of the Literary Fund of Grinnell University; Trustee of Iowa College since its removal to Grinnell, and for several years the head of the Executive Committee and a gratuitous lecturer on Physiology and Hygiene before the students; Trustee of the State Agricultural College, besides various business trusts, as Director in the First National Bank, and for three years its President.

DR. BIRD MOORE.

Departed this life, on the evening of the 8th of February, at the residence of his son-in-law, Dr. McLaughlin, at Austin, Texas, Dr. Bird Moore, of Fayette County, Texas, in the fifty-fourth year of his age.

A native of Tennessee, the deceased graduated at the University of Pennsylvania in 1846, and removed to Texas a few years afterward, where he was engaged in the practice of medicine until within a short time before his death. The deceased is much regretted and missed by his many friends and by the community in which he lived. His purity of mind and uniform kindness endeared him to all he came in contact with. He was interred at Austin, on the 10th of February. R. H. S.

MARRIAGES.

HANFELD—LORETTE.—On Tuesday, February 13th, 1877, by Rev. A. H. Partridge, Benjamin L. W. Hanfeld and Evangeline L., eldest daughter of Francis M. Lorette, M. D., of Brooklyn, Long Island.

HAZLEWOOD—LUDLOW.—At Lawrenceburg, Ind., on the 14th of February, by Rev. S. N. Wilson, Dr. A. J. Hazlewood, of Cincinnati, and Miss Jennie Vail Ludlow.

O'CONNELL—LEACH.—At Vineyard Haven, Mass., Feb. 6th, in the M. E. Church, by Rev. E. Tirrell, assisted by Rev. D. W. Stevens, John D. O'Connell, M. D., and Miss Juliette F. Leach, all of V. H.

DEATHS.

DUNHAM.—At Irvington-on-Hudson, February 18th, 1877, Carroll Dunham, M. D., in the forty-ninth year of his age.

LEWIS.—In this city, on the 10th instant, at the residence of his father, No. 1104 Walnut street, Elisha J. Lewis, M. D.

PAGE.—In this city, on the 18th instant, William Byrd Page, M. D., in the sixtieth year of his age.

WHITE.—In Lawrenceville, N. J., on the 15th instant, Dr. George White.